

**VIRGINIA DEPARTMENT OF ENVIRONMENTAL QUALITY
SOUTH CENTRAL REGIONAL OFFICE**

**FACT SHEET
FOR PROPOSED PERMITTING ACTION
UNDER 9 VAC 5 Chapter 80 Article 1 (TITLE V-CLEAN AIR ACT)**

APPLICANT:

VA-30593
Times Fiber Communications, Inc.
380 Tightsqueeze Industrial Road
Chatham, Virginia 24531

AIRS ID 51-143-0098

FACILITY LOCATION:

380 Tightsqueeze Road in the Tightsqueeze Industrial Park-South, Pittsylvania County
UTM Coordinates are ZONE: 17 EASTING: 640.8 km NORTHING: 4071.6 km

FACILITY DESCRIPTION:

Times Fiber Communications, Inc. is a manufacturer of coaxial and CATV cable covered by Standard Industrial Classification (SIC) Code 3357. This facility receives copper-clad aluminum and aluminum rods, polypropylene (PPE), polyethylene (PPE), polyvinyl chloride (PVC), and fluoropolymer resins (FEP) pellets and manufactures many varieties of coaxial cables for the telecommunications industry. The facility has the potential to operate twenty-four (24) hours per day, seven (7) days per week, fifty-two (52) weeks per year.

EMISSIONS SUMMARY:

PLANTWIDE EMISSIONS SUMMARY [TONS PER YEAR]		
CRITERIA POLLUTANTS	POTENTIAL EMISSIONS	2000 ACTUAL EMISSIONS
Volatile Organic Compounds (VOC)	237.4 tons/yr	17.0

TITLE V PROGRAM APPLICABILITY BASIS:

Due to this facility's potential to emit 237.4 tons per year of VOCs, Times Fiber Communications, Inc. is required to have an operating permit pursuant to Title V of the Federal Clean Air Act as amended and 9 VAC 5 Chapter 80 Article 1.

LEGAL AND FACTUAL BASIS FOR DRAFT PERMIT CONDITIONS:

The State and Federally-enforceable conditions of the Title V Operating Permits are based upon the requirements of the Commonwealth of Virginia Federal Operating Permit Regulations for the purposes of Title V of the Federal Clean Air Act (9 VAC 5 Chapter 80 Article 1), and underlying applicable requirements in other state and federal rules. Applicable requirement means all of the following as they apply to emission units in a Title V source:

- a. Any standard or other requirement provided for in the State Implementation Plan or the Federal Implementation Plan, including any source-specific provisions such as consent agreements or orders.
- b. Any term or condition of any preconstruction permit issued pursuant to 9 VAC 5-80-10, Article 8 (9 VAC 5-80-1700 et seq.) of this part or 9 VAC 5-80-30 or of any operating permit issued pursuant to 9 VAC 5 Chapter 80 Article 5, except for terms or conditions derived from applicable state requirements or from any requirement of these regulations not included in the definition of applicable requirement.
- c. Any standard or other requirement prescribed under these regulations, particularly the provisions of 9 VAC 5 Chapter 40 (9 VAC 5-40-10 et seq.), 9 VAC 5 Chapter 50 (9 VAC 5-50-10 et seq.) or 9 VAC 5 Chapter 60 (9 VAC 5-60-10 et seq.), adopted pursuant to requirements of the federal Clean Air Act or under ' 111, 112 or 129 of the federal Clean Air Act.
- d. Any requirement concerning accident prevention under ' 112(r)(7) of the federal Clean Air Act.
- e. Any compliance monitoring requirements established pursuant to either ' 504(b) or ' 114(a)(3) of the federal Clean Air Act or these regulations.
- f. Any standard or other requirement for consumer and commercial products under ' 183(e) of the federal Clean Air Act.
- g. Any standard or other requirement for tank vessels under ' 183(f) of the federal Clean Air Act.
- h. Any standard or other requirement in 40 CFR Part 55 to control air pollution from outer continental shelf sources.
- i. Any standard or other requirement of the regulations promulgated to protect stratospheric ozone under Title VI of the federal Clean Air Act, unless the administrator has determined that such requirements need not be contained in a permit issued under this article.

- j. With regard to temporary sources subject to 9 VAC 5-80-130, (i) any ambient air quality standard, except applicable state requirements, and (ii) requirements regarding increments or visibility as provided in Article 8 (9 VAC 5-80-1700 et seq.) of this part.
- k. Any standard or other requirement of the acid deposition control program under Title IV of the Clean Air Act or the regulations promulgated thereunder.
- l. Any standard or other requirement governing solid waste incineration under ' 129 of the Clean Air Act.

Each State and Federally-enforceable condition of the draft Title V Operating Permit references the specific relevant requirements of 9 VAC 5 Chapter 80 Article 1 or the applicable requirement upon which it is based. Any condition of the draft Title V permit that is enforceable by the state but is not federally-enforceable is identified in the draft Title V permit as such.

MONITORING

Annealing Oven (Ref. AO-1)

The annealing oven was constructed in 1989 and is subject to the provisions of 9 VAC Chapter 50 regulations. The 500,000 Btu/hr (heat input) natural gas/propane-fired annealing oven heats the drawn wire (7,500 lb_{wire}/batch), which has been wound onto spools, up to 640° F during the 4 to 5-hour batch cycle. The purpose of the annealing process is to restore the wire's tensile strength lost during the drawing (reducing) process. The annealing oven's uncontrolled particulate matter (PM-10 = PM) emissions have been calculated by the permittee to be 2.0 lb/hr and 8.76 tons/yr. The annealing oven did not require a permit to construct and operate per 9 VAC 5-80-10, but is a significant emission unit per 9 VAC 5-80-720(B)(1). The annealing oven's particulate emissions are controlled by a water-cooled condenser in series with a fiberglass filter with a design efficiency of 90% for particulate matter. The annealing oven's annual particulate emissions are not limited by permit condition, and emission calculations are required only for annual permit fee purposes. This fiberglass filter is a passive control device (no fan), and a device to measure pressure drop is not required. The annealing oven's exhaust is limited to 20% opacity, except during one six minute period per hour in which visible emissions shall not exceed thirty (30) percent opacity. Compliance to the particulate emissions limitations will be determined by weekly periodic monitoring for opacity. The permittee will conduct a weekly visible emission observation (see Periodic Monitoring).

#34 Drop Cable Core Line – (DCCL #34)

The #34 drop cable extrusion line (Ref. DCCL #34) is rated 105 lb_{FEP}/hr with a line speed of 275 feet/minute, or 200 lb_{PPE}/hr of polypropylene or polyethylene with a line speed of 800 feet/minute, and is covered by the permit dated February 22, 2002. The #34 drop cable line uses

fluoropolymer resins (FEP) in addition to polypropylene (PPE) and polyethylene (PE) as an electrical insulation material. FEP is a generic family of fluorinated ethylene copolymers, which includes teflon copolymer, and emits hydrogen fluoride when heated to 700° F. The hydrogen fluoride emissions from the extruder are collected by the fume capture system and discharged out through the roof. The drop cable manufacturing process begins by paying out a solid, copper-clad aluminum conductor from a reel. The solid conductor is sized, when required, by drawing the wire through a die that reduces the diameter of the wire. The wire is then straightened and washed with either hot water or an aqueous solution of Garbobond® and isopropyl alcohol (IPA) prior to coating with either FEP or PPE/PE. The coated wire is cooled in a water-filled trough before rewinding the wire onto another reel. The wire braid conductor and outer PVC jacket, which are the same for all drop cables, are applied at other locations within the facility. The permittee is restricted to using specific FEP resins and to maintain specified exhaust stack parameters in order to comply with 9 VAC 5-50-220. The permittee shall perform a monthly mass balance using the equation specified in Operating Permit Condition III.B.3.b and FEP consumption records in Condition III.B.3.a to demonstrate compliance to the hydrogen fluoride emissions limits listed in Condition III.B.1.e. Compliance to the VOC emissions from the washing station will be determined through an IPA mass balance equation. Compliance to the annual emissions will be determined on a rolling twelve month basis. The permittee will keep records of VOC and HF emissions from the #34 drop cable core line and will conduct a weekly visible emission observation (see Periodic Monitoring).

Cold Solvent Cleaning and Ink Removal Machines

There are six semiflex cable draw lines (Ref. SFCDL Nos. 1-6) cold solvent cleaning machines, two drop cable (Ref. RRIR #1, WL #2) cold solvent ink removal stations, and three semiflex cable (Ref. SFCJIR Nos. 1-3) cold solvent ink removal stations at the Tightsqueeze facility, and are covered by the permit to modify and operate dated February 22, 2002.

The six semiflex cable draw lines (Ref. SFCDL #1-6) rated at 12,500 ft/hr, each. The semiflex draw line is a batch operation, where the semiflex cable core is pulled through a 1,700 foot long aluminum tube. The actual core drawing operation takes place outside, between the plant building, and mineral oil is used to lubricate and cool the core. After the core is drawn into the tube, the tube is rinsed in the approved solvent to remove debris and oil, the tube is crimped tightly to the core, and wound on a reel.

The drop cable ink removal stations (Ref. RRIR#1 and WL#2) are rated at 5,500 ft/min, each, and the three semiflex cable jacket ink removal stations (SFCJIR Nos. 1-3) are rated at 12,500 ft/min, each. The ink removal stations are used to remove the ink jet lettering from the semiflex cable or drop cable jackets prior to reprinting. The removal of the old lettering and subsequent reprinting is required to correct defects.

The February 22, 2002 permit requires each cold solvent cleaning and ink removal machine to be enclosed and limits the approved solvents, the total annual throughput, and annual VOC emissions. Since the cold solvent cleaning and ink removal machine's VOC emissions are fugitive (inside the building) and the approved HAPs emissions are below 9 VAC 5-50-160(D) exemption levels, there is neither an hourly emission limit nor a weekly visible emissions observation

requirement. All cold solvent cleaning and ink removal machines operate in a similar manner (continuous web, remote reservoir cold cleaning machines with squeegees) and have the same applicable requirements. The permit limits the Hypersolve[®], Triagen[®], n-propyl bromide, or approved equivalent solvent consumption to 38,340 gallons/yr, and annual VOC emissions to 212.6 tons/yr. N-propyl bromide, which is neither a hazardous air pollutant nor a state toxic pollutant, has the degreasing and evaporation properties of trichloroethylene and methylene chloride. Furthermore, n-propyl bromide quickly removes the defective lettering from cables without damaging the plastic outer jackets. The permittee has 120 days from the issuance of the permit dated February 22, 2002 to complete the conversion of all the cleaning and ink removal machines to meet the BACT requirements. Due to a combination of factors, such as extremely low production, insufficient number of cleaning machines meeting the BACT requirements, and unproven solvent recovery rates, the actual hourly consumption of cleaning solvent in each type of cleaning machine is unknown. Therefore, the permittee is required to determine the maximum design capacity of each cold solvent and ink removal machine using the procedures specified in III.C.1.e to determine the actual hourly and annual VOC emissions. The permit includes language that will reduce the annual solvent consumption and associated VOC emissions from the cold solvent cleaning and ink removal machines such that the permit limits do not exceed the potential to emit.

The permit dated February 22, 2002 limits the individual HAP emission to less than 10 tons/yr, total HAP emissions to less than 25 tons/yr, and the approved solvent to less than 5% of regulated solvent, and the cold cleaning and ink removal machines are not subject to the provisions of 40 CFR 63 Subpart T per 40 CFR 63.460(a).

Core and Jacket Extrusion Lines

The semiflex cable core extrusion lines (Ref. SFCCL Nos. 1-5, 11, 12, 20, 21, 25, 29, 30, 36, 37), semiflex cable jacket lines (Ref. SFCJL Nos. 9, 10, 13, 16, 27), drop cable core lines (Ref. DCCL # 6, 14, 23, 28), and drop cable jacket lines (Ref. DCJL Nos. 7, 8, 15, 18, 24, 26, 31-33) are covered by the permit to construct and operate dated February 22, 2002. The approved plastics for the core and jacket extrusion lines are PPE, PP, and PVC. These semiflex jacket lines, use asphalt, Duribbon[®], or equivalent adhesive to bond the outer plastic jacket to the aluminum tubing. The drop cable jacket lines use Amoco BR310, Indopol[®] H1900, or equivalent adhesive to bond the outer plastic jacket to the aluminum braid. Each core or jacket line is an insignificant activity per 9 VAC 5-80-720(B)(2). However, the total VOC emissions contribution from core and jacket lines is to be included in the facility's total VOC emission limit. The permittee is required to calculate the VOC emissions from core and jacket extrusion in accordance to the equation in Condition III.D.2(a). The semiflex cable jacket lines vent inside the building, and a weekly visible emission observation is not required.

Plantwide VOC Emission Limit

The plantwide VOC emissions are limited to 237.4 tons/yr from all emission units, which include: #34 drop cable extrusion line (Ref. DCCL #34), cold solvent cleaning and ink removal machines (Ref. SFCCL Nos. 1-6, RRIR #1, WL #2, and SFCJIR Nos. 1-3), core and jacket extrusion lines (Ref. SFCCL Nos. 1-5, 11, 12, 20, 21, 25, 29, 30, 36, 37, SFCJL Nos. 9, 10, 13, 16, 27, DCCL # 6, 14, 23, 28, DCJL Nos. 7, 8, 15, 18, 24, 26, 31-33), and ink jet printing (Ref. IJP

Nos. 7-10, 13, 15, 22, 24, 26, 27, 33). The permittee is required to calculate annual VOC and HAPs emissions from all significant emission units as the sum of each consecutive twelve month period using either mass balance or specified equations. The permit includes language that reduces the total permitted VOC emissions from the facility based on the results of the cold solvent cleaning machine's maximum design capacity demonstration.

PERIODIC MONITORING

Monitoring of opacity will require the source to, at least one time per week, observe for the presence of visible emissions from the exhaust stacks from the annealing oven (Ref. AO-1) and the #34 drop cable core line (Ref. DCCL #34), when these emission units are operating. If visible emissions are observed, the permittee will have the option to take timely corrective action to resume operations without visible emissions or perform a VEE in accordance with 40 CFR 60, Appendix A, Method 9 to assure visible emissions' compliance. The permittee will keep a log of observations, any VEE recordings and any corrective actions. If any emission unit has not operated for any period during the week, this fact shall be noted in the individual log, and the visible emission observation for the idle emission unit was not required.

The permittee is required to inspect once per shift each cold solvent cleaning and ink removal machine's squeegee so that no visible film is observed on the cable component, cracks, damaged covers, or piping defects that may result in VOC emissions, and maintain a log of the inspections. All defects or malfunctions that may result in VOC emissions are to be tagged by the operator and shall be corrected within 24 hours.

This permit does not require a visual observation for opacity from cold solvent cleaning and ink removal machines, core and jacket extrusion lines, and ink jet printers since they vent VOCs directly into building.

REQUEST FOR VARIANCES OR ALTERNATIVES:

None

COMMENT PERIOD:

The public notice appeared in the Danville Register on April 30, 2002.

Beginning Date: April 30, 2002

Ending Date: May 30, 2002

All written comments should be addressed to the following individual and office:

Department of Environmental Quality
South Central Regional Office
7705 Timberlake Road
Lynchburg, VA 24502
Phone: (434) 582-5120 Fax: (804) 582-5125
Email address: djskelly@deq.state.va.us

PROCEDURE FOR REQUESTING PUBLIC HEARING:

During the public comment period any interested person may submit written comments on the draft permit and may request a public hearing, if no public hearing has already been scheduled. A request for a public hearing shall be in writing to the above address and shall state the nature of the issues proposed to be raised in the hearing. The Director shall grant such a request for a hearing if he concludes that a public hearing is appropriate. Any public hearing shall be held in the general area in which the facility is located.